

ART 34 ADOT

Claims

1. A surface treating appliance comprising a handle having a longitudinal axis, a surface treating head, a support assembly which is attached to the handle and arranged to roll with respect to the handle for allowing the appliance to be rolled along a surface, and a linkage between the handle and the surface treating head, the linkage being arranged such that rotating the support assembly and the handle about the longitudinal axis causes the surface treating head to turn in a new direction.
2. An appliance according to claim 1 wherein the linkage is also arranged to allow the surface treating head to remain substantially in contact with the surface as the handle is rotated about its longitudinal axis.
3. An appliance according to claim 1 or 2 wherein the end portion of the linkage nearest the surface treating head comprises a pivotable connection between the linkage and the surface treating head.
4. An appliance according to any preceding claim wherein the end portion of the linkage nearest the handle comprises a pivotable connection between the linkage and the handle.
5. An appliance according to claim 4 wherein the pivotable connection to the handle is substantially aligned with the rotational axis of the support assembly.
6. An appliance according to claim 5 wherein the linkage comprises a yoke, at least one end portion of which has a pivotable connection to the handle that is substantially aligned with the rotational axis of the support assembly.

7. An appliance according to any preceding claim wherein the linkage comprises a locking arm arranged to locate in a notch on the pivotable connection to the surface treating head so as to prevent rotation of the pivotable connection.
8. An appliance according to claim 7 wherein the locking arm has at least one deformable portion arranged to release from the notch when a predetermined force is applied to the pivotable connection.
9. An appliance according to claim 7 or claim 8 wherein the locking arm is arranged to release from the notch when the handle is tilted from an upright position.
10. An appliance according to claim 7, 8 or 9 wherein the locking arm is biased towards the notch when the handle is in an upright position.
11. An appliance according to any preceding claim wherein the linkage connects to a central part of the surface treating head.
12. An appliance according to any preceding claim wherein the linkage connects to the surface treating head by means of a jointed arm, the plane of the joint lying at a non-normal angle to the longitudinal axis of the arm.
13. An appliance according to any preceding claim wherein the linkage connects to the surface treating head by means of an arm which has an elbow shape and a rotatable joint.
14. An appliance according to any preceding claim wherein the linkage between the handle and the surface treating head comprises at least one flexible tube.
15. An appliance according to any preceding claim wherein the support assembly houses at least one component of the appliance.

16. An appliance according to claim 15 wherein the support assembly further comprises a fluid inlet for receiving fluid flow, a fluid outlet for exhausting fluid and the component comprises means for acting on the fluid flow received through the inlet.

17. An appliance according to claim 15 or 16 wherein the component comprises, or further comprises, a motor for driving a further component of the appliance.

18. An appliance according to claim 17 wherein the further component comprises surface treating means.

19. An appliance according to any preceding claim further comprising a main body located on the handle.

20. An appliance according to any preceding claim wherein the support assembly comprises one or more rotatable members having an outer surface which defines a rolling support surface in the direction perpendicular to the longitudinal axis of the handle, the support surface being symmetrical about the longitudinal axis of the handle.

21. An appliance according to claim 20 when dependent on claim 19 wherein the support surface extends for a distance which is at least 50% of the width of the main body.

22. An appliance according to claim 20 when dependent on claim 19 wherein the support surface extends for a distance which is at least 75% of the width of the main body.

23. An appliance according to 20 when dependent on claim 19 wherein the support surface extends for a distance which is substantially equal to the width of the main body.

24. An appliance according to claim 20 wherein the central region of the support assembly does not have a support surface.
25. An appliance according to claim 20 or 24 wherein the support assembly includes two rotatable members which are spaced from each other.
26. An appliance according to claim 25 wherein a component of the appliance is located between the spaced members.
27. An appliance according to claim 25 or 26 wherein a fluid inlet or outlet is located between the spaced members.
28. An appliance according to any preceding claim wherein the diameter of the support assembly is less at each end portion than at the central portion.
29. An appliance according to any preceding claim wherein the support assembly has at least one rotational axis which is transverse to the longitudinal axis of the handle.
30. An appliance according to any preceding claim wherein the distance between the geometric centre of the assembly and the outer surface is greater at each end portion than at the central portion.
31. An appliance according to any preceding claim wherein the central portion of the support assembly has a substantially constant diameter.
32. An appliance according to any one of claims 1 to 29 wherein the support assembly is substantially spherical in shape.

33. An appliance according to any preceding claim further comprising a support arm for the surface treating head which extends outwardly from the central region of the support assembly.
34. An appliance according to claim 33 wherein the support arm is a fluid flow duct for carrying fluid to/from the surface treating head.
35. A surface treating appliance substantially as described herein with reference to the accompanying drawings.
36. A surface treating appliance according to any preceding claim in the form of a vacuum cleaner.